Mechanism for the Generation of Odderons in a Primary Toroidal Fusion Chamber Without External Odderon Generator

8 January 2026
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Introduction

This author last wrote on the topic of enhancing toroidal, magnetic-confinement fusion reactions quite some time ago and in the most recent publication from this author on the topic, the use of a counter-rotational proton beam with a particular configuration optimized for generating fusion-enhancing odderons was recommended.

In the interceding period, proposals for more compact, smaller-scale fusion as well as other proposals such as gravitothermoelectric electrical generating modules for local energy generation have, in this author's mind, become the best path forward, at least for most energy customers' needs, as those mechanisms obviate the need to transmit the electricity; a need which constitutes the bulk of the cost involved.

Insofar as the generation of large amounts of electricity are required for certain applications, for example, onboard an aircraft carrier or in a hospital or a factory, a modest toroidal fusion reactor might yet have some practical usefulness if it could be made to function as intended.

This author's previous publications have addressed the problems of wall contact and how to get energy out of the chamber in a zero-contact design, but a truly efficient means of generating odderons in the relevant physical area was elusive. This paper will address itself to how we can generate the needed strong attractors in the needed location; within the plasma stream itself.

Abstract

Given the availability of magnetism-blocking meta-materials, I propose that it would be sensible to wrap a primary toroidal magnet with a secondary magnet of slightly lesser strength and to fit the two together, with the two nested magnets separated by a magnetism-blocking metamaterial which becomes magnetism-permissive when interacting with light. An flat LED material capable of hyperlocal light emission would be used to emit light from 50% of the surface area of the light-emitting material at any given time, with this lit area resembling the red squares on a checkerboard. Alternatingly, the "black squares" would be lit up instead of the red, with the switching being at the rate of millions of times per second.

Whereas the primary magnet would be used to prevent the plasma from contacting and corroding the walls of the chamber and to provide some initial angular momentum to the stream, the secondary magnet's role would be to generate the turbulation of the protons within the plasma. It is when protons pass near to one-another at high relative velocities that strong attractors are

generated, a phenomenon essential for fusion reactions, either sustained or transient, to proceed.

The effect of such a mechanism would be that extremely narrow magnetic field lines would penetrate like Sun rays into the chamber, causing an abrupt turbulation in the protons and electrons in the plasma in the affected area. Rapid switching would both ensure that this turbulation is constantly present and would prevent the formation of hot or cold spots. From there, the previously prescribed SASE-enhanced photovoltaic energy harvesting method would be used to extract energy from the reaction (ibid..) Although plasmas absorb light at comparatively low temperatures, at temperatures above a certain threshold, this author made it clear in previous papers that light would be amplified when passing through such a high-temperature plasma. The plasma would serve as its own light source, but the introduction of an efficiently-generated light from the inner wall of the toroid would provide an energy transfer media which could be leveraged to extract energy efficiently from the reaction.

Conclusion

With this design, some degree of miniaturization of the structure compared to previous designs could be implemented and a useful, energy-producing fusion reaction of a sustained nature could be generated.